#### DEPARTMENT OF TRANSPORTATION

DIVISION OF ENGINEERING SERVICES

Office of Structural Materials

Quality Assurance and Source Inspection

Bay Area Branch 690 Walnut Ave.St. 150 Vallejo, CA 94592-1133 (707) 649-5453 (707) 649-5493



Contract #: 04-0120F4

Cty: SF/ALA Rte: 80 PM: 13.2/13.9

File #: 78.28

# WELDING INSPECTION REPORT

Resident Engineer: Casey, William **Report No:** WIR-030071

Address: 333 Burma Road **Date Inspected:** 24-Sep-2013

City: Oakland, CA 94607

**OSM Arrival Time:** 1500 **Project Name:** SAS Superstructure Prime Contractor: American Bridge/Fluor Enterprises, a JV **OSM Departure Time:** 2330

Contractor: Steward Machine Co. **Location:** Birmingham, AL

**CWI Name:** Fred Hudson / Jimmy Brewer **CWI Present:** Yes No **Inspected CWI report:** Yes **Rod Oven in Use:** Yes No No N/A N/A Yes N/A N/A **Electrode to specification:** No Weld Procedures Followed: Yes No N/A **Qualified Welders:** Yes No **Verified Joint Fit-up:** Yes No N/A N/A Yes No N/A **Approved Drawings:** Yes No **Approved WPS:** Yes No N/A **Delayed / Cancelled:** 

34-0006 **Bridge No: Component:** E2 Shear Key Anchorages

#### **Summary of Items Observed:**

Quality Assurance Inspector (QAI) Andrew Webster was present on the date and times noted above in order to observe the fabrication and Quality Control (QC) functions performed by Steward Machine Company for the E2 Shear Key Anchorages for the SFOBB project. The following items were observed:

#### Steward Machine - Plant 1:

This QAI performed a walkthrough at the shop to verify plates on site and to observe Steward Machine personnel at work machining and welding. Work performed at the Steward Machine shop as noted below:

CNC Machine #230 milling assembly S4C. (Machining west end to size) CNC Machine #231 milling assembly S4B. (Machining east end to size)

The following plates were noted staged throughout the shop in various stages of processing.

Bay 4 – Plates:

S3B-e3. Formed, stressed relieved, partially machined and stud welded.

S3C-e3. Formed, stressed relieved, partially machined and stud welded.

S4C-e4. Formed, stressed relieved, partially machined and stud welded.

Pallet of r3, m3, k3 and j3 plates.

p3 (x6). Cut, beveled and stud welded.

## S3C assembly:

This QAI noted the above mentioned assembly in the welding jig being welded. The welding was done by

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qualified welder Benjamin Rhodes (481). The welding was done to the approved welding procedure (WPS) P2-W126-B. All welding done was monitored by Certified Welding Inspector (CWI) Fred Hudson. The welding was being done on side A.

This QAI noted at shift change that the welding was done by qualified welders Daniel Rowe (73) and Jeffery Hennington (476). The welding was done to the approved welding procedure (WPS) P2-W126-B. All welding done was monitored by Certified Welding Inspector (CWI) Jimmy Brewer. The welding was being done on side A. The welding on side A was completed and the part was flipped and welded on side B.

### j3 plates:

This QAI noted the s3 rods had been removed from the j3 plates, this was due to the rods being welded on in the wrong place. The j3 plates were also ground and the QC Inspector had performed MPT on these plates. This QAI then noted new s3 rods being welded back on the j3 plates. The welding was done by qualified welder John Roy (469). The welding was done to the approved welding procedure (WPS) P2-W126-B. All welding done was monitored by Certified Welding Inspector (CWI) Fred Hudson.

#### S3B assembly:

This QAI noted the above mentioned assembly had the sikadur applied and no other work was being done with this assembly at this time.





#### **Summary of Conversations:**

This QAI discussed with the QC Inspector and the CWI the need for the PJP welds on the S4B assembly strap plates to the e4 plate needing to be ground flush per the contract drawings. The discussion was about how to get the welds ground flush with out removing the s3 rods first. Other basic communication was performed between the QAI and the QC Inspector during the observations.

#### Comments

This report is for the purpose of determining conformance with the contract documents and is not for the purpose of making repair or fit for purpose recommendations. Should you require recommendations concerning repairs or remedial efforts please contact Gary Thomas 916-764-6027, who represents the Office of Structural Materials for your project.

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<b>Inspected By:</b>	Webster, Andrew	Quality Assurance Inspector
Reviewed By:	Foerder, Mike	QA Reviewer